



**Dlamini, Nokuthula N and Meyer, Johanna C and Kruger, Danie and Kurdi, Amanj and Godman, Brian and Schellack, Natalie (2018) Feasibility of using point prevalence surveys to assess antimicrobial utilisation in public hospitals in South Africa; a pilot study and implications. In: 4th Training Workshop and Symposium MURIA Group, 2018-06-18 - 2018-06-21. (In Press) ,**

This version is available at <https://strathprints.strath.ac.uk/64477/>

**Strathprints** is designed to allow users to access the research output of the University of Strathclyde. Unless otherwise explicitly stated on the manuscript, Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Please check the manuscript for details of any other licences that may have been applied. You may not engage in further distribution of the material for any profitmaking activities or any commercial gain. You may freely distribute both the url (<https://strathprints.strath.ac.uk/>) and the content of this paper for research or private study, educational, or not-for-profit purposes without prior permission or charge.

Any correspondence concerning this service should be sent to the Strathprints administrator: [strathprints@strath.ac.uk](mailto:strathprints@strath.ac.uk)

The Strathprints institutional repository (<https://strathprints.strath.ac.uk>) is a digital archive of University of Strathclyde research outputs. It has been developed to disseminate open access research outputs, expose data about those outputs, and enable the management and persistent access to Strathclyde's intellectual output.



**Fourth Training Workshop and Symposium MURIA Group in conjunction with ISPE 18 – 21  
June 2018  
University of Namibia, Windhoek**

**Theme: Medicine utilisation research in Africa influencing patient care and policy**

**Title: Feasibility of using point prevalence surveys to assess antimicrobial utilisation in public hospitals in South Africa; a pilot study and implications**

**AUTHORS and Contact of submitting author:** Nokuthula N Dlamini<sup>1</sup>, Johanna C Meyer<sup>1</sup>, Danie Kruger<sup>1,2</sup>, Amanj Kurdi<sup>3</sup>, Brian Godman<sup>3,4</sup>, Natalie Schellack<sup>1</sup>. **Submitting author:** Brian.Godman@ki.se

**Affiliations**

<sup>1</sup>School of Pharmacy, Sefako Makgatho Health Sciences University, South Africa

<sup>2</sup>Pharmacy, Private Hospital, Pretoria, South Africa

<sup>3</sup>Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde, Glasgow, United Kingdom

<sup>4</sup>Division of Clinical Pharmacology, Karolinska Institutet, Karolinska University Hospital Huddinge, Stockholm, Sweden

**Background:** There is currently a lack of data regarding antimicrobial use among public hospitals in South Africa (SA). This is a concern given growing antimicrobial resistance rates in SA, and needs to be addressed

**Objectives:** Firstly, determine the appropriateness of the point prevalence survey (PPS) data collection instruments for performing antimicrobial utilisation studies among public sector hospitals in SA; secondly, determine current antimicrobial utilisation patterns in a public sector hospital in SA, and thirdly evaluate the compliance of antimicrobials prescribed with the hospital formulary, the Essential Medicines List (EML) and the current Standard Treatment Guidelines in SA. The findings to guide future quality improvement programmes in this and other public hospitals in SA if pertinent.

**Methods:** A PPS was conducted in Dr George Mukhari Academic Hospital from February to March 2017. All patient files in one single in-patient ward were completely surveyed in a single day. The number of patients who were on antimicrobials served as the numerator and the denominator comprised the total number of patients in the ward. The data was taken from patients' bed charts, which are paper-based and organized in a file, as they have all the patients' records.

**Results:** A total of 39 wards and 512 patient files were surveyed. The overall prevalence of antimicrobial use was 38.5%. Beta lactamase inhibitors and antimicrobials for TB were the most prevalent antimicrobials. More than two thirds (83%) of antimicrobial treatment was modified following culture sensitivity test (CST) results, and 98% of antimicrobials complied with the South African National EML. However, there is concern with the lack of IV to oral switching where appropriate.

**Conclusions:** The PPS method offers a standardized tool that can be used to identify targets for quality improvement of antimicrobial use in hospitals. However, there were concerns with the time taken to conduct PPS studies, which is an issue in resource limited situations. This is being addressed with the development of an APP alongside concerns with the lack of IV to oral switching in this hospital.

